

PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in Apparatus for Applying Lotions, Dyes, Bleaches or like Liquids to the Hair.

I, FLORA McDONOUGH-KALEY, a British Subject, of Via Antonio Bosio 13, Rome, Italy, formerly of Belgrave Cottage, Upper Belgrave Street, London, S.W.1, do hereby
 5 declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—
 10 It is frequently necessary in hairdressing, particularly in ladies hairdressing, to treat the hair near the roots, or the scalp, with a liquid, such, for example, as a lotion, dye,
 15 bleach, or conditioner. The usual method of carrying out such treatment is to part the hair with a comb, and apply the liquid with a brush into the parting, this operation being repeated a considerable number of times
 20 to cover the whole of the head. Normally the treatment takes a considerable time. In the particular instance of hair bleaching it is usual after the hair has once been bleached that the hair as it grows requires to be
 25 bleached near the roots only to the extent that it matches the rest of the hair. If a considerable time is taken in applying the bleaching solution the positions where the bleaching liquid is first applied will be
 30 bleached to a greater extent than the positions where the liquid is last applied when the whole head is eventually washed to remove the bleaching solution or stop its action. It will be seen, therefore, that it is
 35 at present extremely difficult to bleach the hair growing near the roots to the same shade as the remainder of the previously bleached hair all over the head.
 The main object of the present invention
 40 is to provide an appliance or apparatus which will enable the hair near the roots, to the exclusion of the remainder of the

hair over the whole of the head, to be treated in a very much shorter time than is possible with the conventional appliances mentioned above, with the result that where
 45 the liquid, such as a bleaching liquid, must be applied for a specific period only, and to the hair near the roots only, it is possible to completely treat the head so as to obtain substantially the same time for action on all
 50 the parts to which the liquid is applied before taking action to neutralise the effect of the liquid.

According to the present invention, apparatus for applying liquid to the hair near the roots comprises a body having at one end
 55 thereof a hair parting member, a liquid reservoir, and a channel for conveying liquid from said reservoir to a cavity in the underside of the body and adjacent but spaced
 60 from the hair parting member, a rotary brush being mounted in the cavity so that when said apparatus is passed over the scalp with the hair parting member leading, said liquid
 65 is applied to the hair by the rotary brush in the parting formed by the parting member.

Further, according to the present invention, apparatus for applying liquids to the hair near the roots comprises a body, a hair parting member on said body, means for attaching a reservoir for liquid to said body, and
 70 a channel in said body for conveying liquid from a reservoir attached to said body to a rotary brush mounted in a cavity in the body, the said liquid being applied by the
 75 brush to the hair in the parting formed by the parting member.

Further, according to the invention, apparatus for applying liquids to the hair near the roots comprises a body, a hair parting
 80 member on said body, means on each side of the body for spreading outwardly on each

side of the parting member the hairs parted by the said member, means for attaching a reservoir for liquid to the said body, and a channel for conveying liquid from a reservoir attached to said body to a cavity between the hair spreading means in which is mounted a rotary brush so that liquid is applied to the hair by the brush in the parting formed by the parting member.

The invention is hereinafter described with reference to the accompanying drawings, in which:—

Figure 1 is a side elevation of one form of apparatus according to the invention;

Figure 2 is a front elevation of the apparatus shown in Figure 1;

Figure 3 is an underneath plan view looking in the direction of the arrow A in Figure 1;

Figure 4 is a longitudinal section on the line 4—4 of Figure 2;

Figure 5 is a transverse section on the line 5—5 of Figure 1;

Figure 6 is a plan view looking in the direction of the arrow B in Figure 1; and

Figure 7 is a view showing the manner of holding and utilizing the apparatus.

Referring to the drawings, the apparatus comprises a body 10, conveniently formed by moulding in two halves which are secured together in the central longitudinal plane of the body. The body is generally segment-shaped in side elevation, and of small width compared with its length and height. At its forward end the body is brought to a rounded point 11, the point 11 constituting a hair-parting member, and, from the region of the point, the upper edge sweeps upwardly in a convex curve 12. The lower surface of the body adjacent the hair-parting member has a concave curvature at 13, a pair of lateral flanges or beads 14, 14 (Figures 2 and 6) being formed on the body to increase the width of this lower surface portion. The concavely-curved portion 13 of the lower edge merges into a convexly-curved portion 15 from the rear end of which extends a tail portion 16 the upper surface of which is formed by a concave-curved portion 17 and a flat surface 18.

A part-circular slot 19 extending inwardly from the lower surface of the body contains a flat circular brush 21 mounted rotatably on a spindle 28 extending across the slot. The edge of the brush 21 extends beyond the portion 15 of the lower surface of the body. The flanges or beads 14, 14 extend rearwardly at least to the rear end of the slot 19.

A row of short, stiff teeth 22 protrude from the lower surface portion 13 along its centre line, and, since the brush 21 is symmetrically placed with regard to the longitudinal vertical central plane of the body, the said teeth are in line with the centre of the thickness of the brush.

A screw-threaded socket 23 is formed in the tail portion 16 of the body, opening upwardly in the flat surface 18, and a channel 24 in the body connects the lower end of the socket 23 to the upper portion of the slot 19, as shown in Figures 1 and 4. The screw-threaded socket 23 is adapted to receive a screw-threaded spigot 25 formed on one end of a liquid container 26, the container being of elongated bulbous shape as shown and its lower portion, when it is mounted on the body, following closely the curvature of the concave edge 17 of the tail portion. As shown in Figures 2 and 7, the reservoir is symmetrical about the longitudinal vertical central plane of the body. The container 26 is resiliently deformable, and is conveniently formed of thermoplastic material such as polythene. The container is preferably transparent.

It will be apparent that, by squeezing the container 26, liquid is expelled therefrom and fed to the brush 21.

The apparatus is used in the following manner. The body 10 is held between the tips of the thumb and fingers, as shown in Figure 6, so that the container 26 lies between the lower parts of the said thumb and fingers and can be compressed and released without affecting the holder's grip on the body.

The apparatus is passed in straight lines over the scalp, the hair-parting member 11 parting the hair along the line of movement and the flanges or beads 14, 14 spreading the hair outwardly on both sides of the parting. The convexly curved edge 12 assists in separating the hair on the two sides of the parting.

As the apparatus passes through the hair, the container 26 is squeezed to expel liquid therefrom and transfer it to the brush, and, the brush being rotated by contact with the scalp, the liquid is applied to the hair near the roots in the parting. The quantity of liquid applied to the hair can be controlled by the user who can squeeze the container to any desired extent thus varying the quantity of liquid fed to the brush. Only a short length of the circumference of the brush 21 is exposed, the remainder being wholly enclosed within the slot so that no part of the hair except that near the roots on either side of the parting can be touched thereby. Thus there is no risk of unintentional application of treating liquid to the hair other than near the roots.

The teeth 22 engage the scalp and are felt by the user, thus enabling her to guide the apparatus in straight lines and treat the whole scalp without any great degree of overlapping. When the apparatus is in the position for use the outlet from the container is at the lower end of the latter. The container is preferably of such a size as to en-

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able the whole head to be treated with the contents thereof.

WHAT I CLAIM IS:—

1. Apparatus for applying liquids to the hair near the roots comprising a body having at one end thereof a hair parting member, a liquid reservoir, and a channel for conveying liquid from said reservoir to a cavity in the underside of the body and adjacent but spaced from the hair parting member, a rotary brush being mounted in said cavity, so that when said apparatus is passed over the scalp with the hair parting member leading, said liquid is applied to the hair by the rotary brush in the parting formed by the parting member.
2. Apparatus for applying liquids to the hair near the roots comprising a body, a hair parting member on said body, means for attaching a reservoir for liquid to said body, and a channel in said body for conveying liquid from a reservoir attached to said body to a rotary brush mounted in a cavity in the body the said liquid being applied by the brush to the hair in the parting formed by the parting member.
3. Apparatus for applying liquids to the hair near the roots comprising a body, a hair parting member on said body, means on each side of the body for spreading outwardly on each side of the parting member the hairs parted by the said member, means for attaching a reservoir for liquid to the said body, and a channel for conveying liquid from a reservoir attached to said body to a cavity between the hair spreading means in which is mounted a rotary brush so that liquid is applied to the hair by the brush in

the parting formed by the parting member.

4. In combination with apparatus according to Claim 2 or 3, a deformable container for liquid from which liquid is able to be expelled by squeezing the container.

5. Apparatus according to Claim 2 or 3, wherein the body is generally segment-shaped in side elevation, one end of the segment forming the hair parting member, the cavity for the rotary brush being in the underside of the body adjacent the hair parting member, and the attachment point for the liquid reservoir, which is at the other end of the segment, being so arranged that a reservoir attached thereto is symmetrical about the longitudinal vertical centre plane of the body.

6. Apparatus according to Claims 3 and 5, wherein the means for spreading the hair outwardly comprise a pair of lateral flanges or beads extending outwardly from the lower edges of the sides of the body adjacent the end forming the hair parting member.

7. Apparatus according to any preceding claim, wherein a longitudinal row of teeth is provided between the hair parting member and the brush, the said row being in line with the parting member and the centre of the thickness of the brush.

8. Apparatus for applying liquids to the hair near the roots, substantially as described with reference to, and as shown in, the accompanying drawings.

For the Applicant:—

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PROVISIONAL SPECIFICATION.

Improvements in Apparatus for Applying Lotions, Dyes, Bleaches or like Liquids to the Hair.

I, FLORA McDUGALL-KALBY, a British Subject, of Belgrave Cottage, Upper Belgrave Street, London, S.W.1, do hereby declare this invention to be described in the following statement:—

It is frequently necessary in hairdressing, particularly in ladies hairdressing, to treat the roots of the hair or the scalp with a liquid, such, for example, as a lotion, dye, bleach, or conditioner. The usual method of carrying out such treatment is to part the hair with a comb, and apply the liquid with a brush into the parting, this operation being repeated a considerable number of times to cover the whole of the head. Normally the

treatment takes a considerable time. In the particular instance of hair bleaching it is usual after the hair has once been bleached that the hair as it grows requires to be bleached at the roots only to the extent that it matches the rest of the hair. If a considerable time is taken in applying the bleaching solution to the hair roots the positions where the bleaching liquid is first applied will be bleached to a greater extent than the positions where the liquid is last applied when the whole head is eventually washed to remove the bleaching solution or stop its action. It will be seen, therefore, that it is at present extremely difficult to

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bleach the hair growing at the roots to the same shade as the remainder of the previously bleached hair all over the head.

5 The main object of the present invention is to provide an appliance or apparatus which will enable the hair roots to the exclusion of the remainder of the hair over the whole of the head or the scalp to be treated in a very much shorter time than is possible with the conventional appliances mentioned above with the result that where the liquid, such as a bleaching liquid, must only be applied for a specific period to the roots only it is possible to completely treat the head so as to obtain substantially the same time for action on all roots before taking action to neutralise the effect of the liquid.

10 In accordance with the present invention an apparatus for applying liquid such as lotion, dye, bleach, or the like to the hair roots or to the scalp comprises a reservoir for the liquid from which extends a parting tooth or member, a channel being provided from the container to a position in the neighbourhood of the tooth so that as the tooth is passed through the hair in engagement with the scalp the liquid may be fed on to the scalp or hair roots at or in the neighbourhood of the tooth. It is preferred that a small rotary brush should be positioned in the tooth immediately behind the point and should project from the tooth so as to contact the head immediately behind the point, the liquid channel leading on to the periphery of the brush so that the brush will dispense the liquid on the head as it rotates by movement over the head.

When such an apparatus is in use it is merely necessary to pass the parting tooth through the hair, the point of the tooth being maintained lightly in contact with the scalp. The liquid emerging in the neighbourhood of the tooth, for example, from the rotary brush, will be applied directly to the scalp or hair roots. It will be seen that it takes a very much shorter time to pass the tooth through the hair to apply the liquid over a narrow strip of the scalp than it would take to part the hair in accordance with orthodox practice and to apply the liquid with a brush.

15 In one embodiment of the invention the parting tooth is moulded from a plastic material together with a stem. On the upper end of the stem, a plastic container is mounted by means of a screw thread. The stem is substantially solid and includes a small channel passing therethrough from the container. The tooth is formed on a small projection extending angularly from the stem and in this projection a small recess is provided in which a rotary brush is mounted. The rotary brush is of narrow width, for example, about $\frac{1}{4}$ " and a small portion only of its periphery projects from

the recess immediately behind the pointed end of the tooth. It is preferred that the rotary brush should be so mounted that no spindle protrudes externally and for this purpose the walls of the recess are moulded of a comparatively thin material and include bearing holes closed at the outer ends to receive the brush spindle. The fact that the walls are thin enables them to be sprung apart for the insertion of the brush. The channel passes down the stem and terminates at the periphery of the brush so that when the brush is rotated liquid will flow from the channel on to the periphery of the brush. The liquid container is normally quite large and is preferably constructed so that the end opposite to the stem includes a large flat surface on which the whole apparatus may be rested in an inverted position when not in use, to retain the liquid in the container.

For use the stem of the apparatus is held in the operator's hand with the container uppermost and the tooth is applied to the head of the person being treated. The tooth is moved forwardly through the hair in a substantially straight line, being maintained lightly in contact with the scalp. The brush following immediately behind the tooth is rotated by contact with the scalp and delivers liquid from the container on to the scalp and hair roots over the narrow path of movement. Having completed one complete movement over the scalp the apparatus is withdrawn and moved again over the scalp in a path, close and parallel to the original path. By a number of such movements the whole scalp may be quickly treated.

In a modified form of the apparatus in accordance with the invention no rotary brush is provided but instead the channels for liquid passing down the stem are extended to the neighbourhood of the point of the tooth so that when in use the liquid will flow to the point of the tooth and from there on to the adjacent hair roots or portion of the scalp contacted by the tooth in its movement over the head. A further modified form of the apparatus two or more teeth may be provided so that two or more parallel paths over the head may be treated simultaneously.

It is preferred that the stem and tooth should be formed by a plastic moulding and that the container should be in the form of a plastic bottle which should be sold by the retail trade complete with liquid contents. Various kinds of liquid could be supplied in different bottles so that the apparatus may be used for different treatments. Alternatively, the container may be integrally formed with the stem and tooth and the upper part thereof may be in the form of a screw threaded cap which is removable

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to allow the container to be filled with a suitable liquid.

A suitable plastic from which the apparatus and bottles may be moulded is that known as polythene.

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1 SHEET

This drawing is a reproduction of the Original on a reduced scale.

